Regional-Based Leach for Energy Efficiency in Wsns

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***Abstract*— Network lifetime and throughput are the major considerations for determining the overall performance of a wireless sensor network (WSN). There have been various protocols proposed based on Hierarchical Clustering to improve network lifetime. The proposed Regional-Based LEACH is a centralized cluster-based protocol for extending the stability period of the WSNs. This protocol aims to accomplish better energy efficiency by dividing the sensing field into sub-regions and selects Cluster Heads for each region based on their residual energy along with the incorporation of Base station mobility. This leads to a relatively uniform energy consumption and residual energy level among the nodes in a region leading to an extended stability period.**

***Index Terms*— WSNs, Clustering, LEACH, Energy efficiency.**